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Seeking Dragons in IS Research

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Abstract

A 'myth' is an "unquestioned belief … that is not supported by demonstrated facts." In the scientific endeavor to build a relevant and rigorous knowledge base, myths can be potentially dangerous, leading to the institutionalizing of unquestioned beliefs. The primary aim of this paper is to sensitize the reader to how myths are formed and propagated through research, and to warn against the dangers of doing so in IS. We look at literature in IT alignment which, despite having received continued attention, has not been wholly successful. We attribute some of this failure to the possible prevalence of myths in the literature.

I. INTRODUCTION

A 'myth' is an "unquestioned belief … that is not supported by demonstrated facts." (Trice and Beyer 1984, p. 655) MIS as a discipline strives to be primarily an applied field that can inform the practice of managing information systems (IS) in organizations (Keen, 1980). The recent debate on rigor versus relevance of MIS research has resulted in an impasse; with most researchers agreeing that we need both to build an applicable scientific knowledge base (Robey and Markus, 1998; Lee, 1999; Benbasat and Zmud, 1999). Given this goal, 'myths' in MIS research could be dangerous. Building a cumulative research tradition that is not supported by facts, but rather by unquestioned beliefs, hinders the objectives of attaining either rigor or relevance. The primary goal of this paper is to warn researchers against inadvertently spreading myths, or engendering them. In order to achieve this objective, we provide a framework, which could be used to identify myths and differentiate between scientific and unscientific knowledge. This template is grounded in literature on logic and scientific explanation from philosophy of science. Using a framework based on the philosophy of science is especially relevant since it deals with 'analyzing the character of scientific investigations' (Bechtel 1988). In particular, we refer to works from philosophers such as Rosenberg (2000), Fetzer (1993) and Popper (1972). The philosophy of science literature provides insight as to what can constitute a test for scientific research.

An area of IS that has significant impact on organizational practice is IT alignment. Organizations spend a significant amount of resources on procuring, maintaining,

implementing, and utilizing IT hardware, software, and personnel[1]. IT alignment research aims to inform organizations how to optimally do so. The stream of research in IT alignment was born around the mid 1990's, during the period of the IT productivity paradox. Practitioners and researchers in IS (Brynjolfsson, 1993; Brynjolfsson et al, 1994), management (Clemons, 1991), and economics (Roach, 1989; David, 1989; Economist, 1990) were concerned about the lack of equitable return on investment as compared to the spending on IT. Skepticisms about the value of IT surfaced. Hence IS researchers started studying the role of business strategy vis-à-vis IT strategy. The use of the term *strategy* in the business context dates back to the twentieth century. Use of this term from the perspective of *competitive advantage* started in the second half of twentieth century (Ghemawat 2002). There have been a number of studies carried out in the area of competitive use of information technology (IT). Research on strategic IT-alignment studies "the fit between business strategic orientation and information systems (IS) strategic orientation." (Chan et al., 1997, p. 125) It is commonly believed that the competitive use of IT brings much potential, such as cost efficiencies, for organizations (Kettinger et al. 1994). Despite this, it is still difficult for many organizations to harness the power of IT to achieve long-term benefits (Luftman et al., 1999) and there is no clear cut solution for organizations to follow for aligning their IT and business strategies. In short, nature of this concept is still vague and it demands further research.

We posit that some of the problems of IS research, and IT alignment research in particular, could be attributed to the myths prevalent in the literature. Since myths are not based on logic and observed facts, incorporating them into our scientific knowledge base may have inappropriate consequences. If claims made by researchers are propagated without valid justification, there is a danger that new research will be built upon them, and through the passage of time, the myths will become ingrained in our research. In order to elucidate our notion of myths, we look at IT alignment literature focusing on three highly cited articles[2]. A similar analysis could be performed on any other stream of

[1] Global purchases of IT goods and services are estimated to reach $1.55 trillion in 2007 (http://www.forrester.com/Research/Document/Excerpt/0,7211,40451,00.html).

[2] In order to select among the literature, a search was done in Science Citation Index and Google Scholar using different key words of IT, business, strategy, strategic, and alignment and among the final results we chose three highly cited articles that we could use to illustrate our points.

research. We chose IT alignment as just one example of an area where myths have potentially been initiated. For each article, we draw upon our framework based on literature in philosophy of science to highlight myths. The focus of this study is not to critique IT alignment literature or specifically the selected papers, but to demonstrate the initiation of myths. In the following section we provide a review of literature that informs us about myths. In section 3, we present our methodology and framework, derived from our literature review. Section 4 reports our analysis of the articles in IT alignment in light of our framework. We summarize by presenting some concluding remarks.

II. LITERATURE REVIEW

1. Myths

The study of myths dates back to Tylor (1871), and Frazer (1936) who believed that each myth reveals some aspect of human life. More recently, Campbell (1976a, b, c) contributed significantly to the study of myths by looking at psychological (similar to Jung and Freud's approach) as well as ethnological and cultural (similar to Durkheim and Malinowski's approach) issues. Anthropologists have long recognized the importance of myths to human sense making of their world (Campbell, 1974).

Trice and Beyer (1984) define a myth as a remarkable narrative about events, the origin of which might be imaginary. It is an unquestioned belief about something without support of demonstrated facts. From Cohen's (1969) point of view,

> "myths perform several linked functions … they contain levels of meaning which achieve an intuitively experienced correspondence … myths are narratives with a time-anchored structure … they deal simultaneously with the socially and psychologically significant … they make use of what is perceived and available and link it to the primordial sense of a deeper level of reality, they have had the power which we rightly attribute to them in some societies." (Cohen , 1969, p. 351)

One theory treats myths as a means of explanation. For example, Tylor (1958), defined a myth as a means to use metaphors to explain, understand, and control forces of nature. Cohen (1969) believes that this type of myth does not explain its social and collective character. In addition, he believes that this does not take into account the symbolism of myths. Another theory of myth is 'mythopoeic' theory originated from Müller. An extended version of this theory, Ernst Cassirer's (1961), considers a myth as a way of using language for expressive purposes through symbolic devices. This perspective views

mythical thinking to be in contradiction with science and philosophy, free from requirements for understanding real objects, a process in which the mind invents the properties of the objects. Myths have also been theorized on from a psycho-analytic perspective, for example that of Freud. These theorists treat myths as day dreams, symbols of which are constructed in the unconscious. Cohen (1969) argues that psycho-analytic perspective does not explain why people invent a myth and consider it as truth, and why it is an important social and cultural fact. Therefore, he argues that this theory is not capable of explaining all kinds of myths. Sociological theories of myth are mainly associated with Durkheim and Malinowski. Durkheim viewed myth as a part of the religious system, which along with rituals is a means of solidarity; the former being expressed in words and the latter in actions (Cohen, 1969). Malinowski's theory is derived from Durkheim's, adding more pragmatism to it. Cohen argues that weakness of most sociological views of myths is that they fail to explain why social functions of myths are not carried out by other devices. Lévi-Strauss views myths as precursors to science. He considers a myth as a "device for 'mediating contradictions' or 'oppositions' as experienced by men … The myth sets up the contradictions and then, by an intellectual trick, mediates them." (Cohen, 1969, p. 346) Cohen does not accept the idea of myths being precursors to science. Instead he states, "… if one recognizes the significance of the narrative element and the processes of establishing correspondences between layers of structure and meaning, then myth is akin to poetry and narrative fiction, not to science." (Cohen, 1969, 353) Cohen (1969) argues that another weakness of Lévi-Strauss's theory is that it considers the narrative nature of myths as secondary, while Cohen believes it is of primary value. Cohen (1969) argues that different theories would give different answers to the question of why myths, at least at the onset, foster unity of a community. In Cohen's view a myth is more of a blocking device for curiosity and seeking of more explanation for unknown things. When compared to cosmology, Cohen argues that since myths provide a time reference (even if to an imaginary event), they are more legitimate in the creation of ideas. In order to legitimize present social practices, there is a need to anchor the present in the past, and myths are a means to achieve that. Therefore, symbols of myths are also records or archives of social practices of the past.

Being aware of myths seems valuable in understanding organizations and making sense of them. Many researchers have acknowledged the importance of myths in the analysis of organizational practices (Hirschheim and Newman, 1991; Newman, 1989; Bowles, 1989; Robey and Markus, 1984; Meyer, 1982 a, b; Feldman and March, 1981). These studies have contributed to our understanding of myths, rituals, and ideologies in organizational settings. Robey and Markus (1984) state that "Myths are not necessarily false; their essential characteristic is they are widely believed … the rituals help to ensure this perception." (Robey and Markus, 1984, p.12) As Spich states,

> "…myths use fantastic imagery and symbolic narrative to give meaning to things in life which are obscure, contradictory and ambiguous. It establishes relations among categories of ideas and beliefs which allow the individual to structure meaning in complex situations. Through repetitious telling of stories, myths disguise contradictions and create beliefs that choices or circumstances are natural and, thus, it is possible to take action in the world. They are flexible enough to be useful, via metaphors, to solve problems in many situations and changing circumstances." (Spich, 1995, p. 11)

Hirschheim and Newman (1991) studied the behavior of information systems developers in making sense of situations by classifying the symbols they use as myths, metaphors, and magic. Kaarst-Brown and Robey (1999) use a "magic dragon" as a mythical concept for understanding information technology in organizations. The magic dragon represents information and communication technologies. This metaphor is drawn from the language of the participants of their study since they view IT as something mysterious and magical, and consider IT personnel as wizards who understand these systems. In their paper, when studying rituals in design of information systems, Robey and Markus (1984) argue that in order to maintain the appearance of rationality, system developers symbolize rationality whether or not they take a rational action. These symbols grant meaning to the actions. These rituals enforce the myth of rationality. An example of a symbolic action is to create large reports which have little instrumental value in making decisions. This action creates the perception that the decisions are made based on "hard information" rather than "soft intuition." Most times, these rituals enable employees to act in self interest without dishonoring the organizational ideologies. Robey and Markus (1984) call for an awareness of these rituals. They state that a "naïve actor who remains unaware of the differences between symbol and substance, or between ritual and reality, will be a less effective participant in the process." (p. 13)

The unquestioned use of myths has been condemned by many of these authors (Hirschheim and Newman; 1991, Newman 1989; Spich, 1995). For example, Hirschheim and Newman (1991) argue that symbolism (including use of myths) can lead to improper responses to unique situations. Newman (1989) argues that many of the beliefs about ISD are based on a pragmatic approach rather than on a sound theoretical foundation. "These unexamined beliefs or heuristics have been inculcated by work experiences, by training and word-of-mouth." (p. 127) He adds that the beliefs of developers about users and organizations shape their practice just the same way that folklore governs lives of ordinary people. Newman argues that fallacies that come from unquestioned beliefs could explain the failures of system development in the literature. He adds that

> "although rules-of-thumb are supposed to make life simpler for system analysts, we would claim that, on the contrary, they sometimes precipitate the resistance and induce the very failure that the analyst would undoubtedly like to avoid … We would dismiss as inadequate the beliefs held by systems analysts in ISD and suggest that ISD practitioners need to examine critically the assumptions they hold about the users and organizations." (Ibid, p. 140)

Some researchers have a negative view of myths and consider them "erroneous beliefs clung to against all evidence … synonymous with fallacies and old wives' tales." (Cohen, 1969, p. 337) We as researchers need to understand myths and be aware not to engender new myths and reinforce old ones indiscriminately.

Spich (1995), like other researchers, acknowledges the importance of myths. However, he is concerned that a myth has the potential to become an ideology. Beyer and Trice define ideologies as "relatively coherent sets of beliefs that bind some people together and that explain their worlds [to them] in terms of cause-and-effect relations." (p. 166 from Trice and Beyer 1984) Spich (1995) defines an ideology as an institutionalized and formalized myth. He states that "we do not often think of our colleagues as ideologues because it is an impolite thought. Yet by commission and omission we all contribute to the rise of ideologies" (p. 25). Ideologies guide organizations to respond to environmental disturbances and threats by supplanting structures, affecting people and structures (Meyer, 1982, a, b). "They legitimize certain actions, render other actions heretical, evoke historical reinterpretations, and create events that have yet to occur." (Meyer, 1982 b, p. 47, from Beyer 1981) They are manifested in beliefs of members of an organization

and in linguistic symbols, which include shared concepts. They "delete from conscious experience those events for which names do not exist and, by categorizing those events that are noticed, they ascribe meanings." (Meyer, 1982 b, p. 48) Narratives or myths create ideologies by providing meaning for future and "anchoring the present in the past."

Spich (1995) views it as the responsibility of all of researchers to look at issues critically and question ideologies. In his paper, Spich (1995) discusses some of the myths in globalization research and calls for a discourse as an "intellectual activity of constantly striving for the truth about things." (p. 6) This kind of activity calls for open and critical argumentation of ideas and insights to reach rigorous research: "The norms of discourse expect rigour in intellect, analysis and honesty … discourse is largely a normative attitude of high standards about the intellectual and social processes used to pursue understanding and truth about the world." (ibid, p.6) He calls for sophisticated discourses that question the concepts and accepted theories sharply and actively, and refine them attentively. In doing so, he provides five criteria to evaluate the volcano metaphor he invented to define globalization. These criteria include the accuracy and validity of the content, utility, representativeness of interests, adherence to scientific norms, and mixes of motives. He concludes that the myth of globalization fails to meet most of these criteria.

2. IT Alignment

As discussed above, the impact of myths has been particularly well investigated in the areas of information system development (ISD) and globalization (Hirschheim and Newman; 1991, Newman 1989; Spich, 1995). We could attribute this attention to the fact that ISD is a relatively long enduring and well established area of research in IS. Since the inception of the field in the late 60s, IS has been concerned with various ways of theorizing on, optimizing, and improving the system development process. Similarly, the 90s brought the globalization imperative, with studies in management science focused on how to manage the phenomenon. The area of IT alignment can be considered equally important. As noted by Ciborra (Ciborra, 1997; Ciborra and Hanseth, 1998), the language of addressing the problem of aligning IT and business strategy may differ, but the issue

remains pertinent and persistent. The danger of myths being institutionalized as ideologies has been acknowledged in ISD and globalization, but not in other areas. As discussed in the earlier section, myths are frequently used to make sense of practice and are most likely to originate in practice. Given the importance of research in alignment to organizational practice, this danger seems especially prevalent in alignment literature. However, we would like to emphasize that the focus of this paper is not on IT alignment research. Instead, our aim is to bring to light the myths existing in IS, using the case of IT alignment literature, and to warn against institutionalizing these myths. While the use of myths has been shown as constructive (Hirschheim and Newman, 1991; Newman, 1989; Bowles, 1989; Robey and Markus, 1984; Meyer 1982, a, b; Feldman and March, 1981), the unquestioned and uncritical adoption of myths is deleterious (Hirschheim and Newman; 1991, Newman 1989; Spich, 1995). Our paper attempts to demonstrate how this occurs.

The next section summarizes our philosophy of science literature review. By reviewing this literature we came up with a framework for identifying myths. Using this framework we investigated IT alignment literature focusing on three highly cited studies. We bring to question the prevalence of myths in IS research, this cautioning the indiscriminate reliance on them.

III. METHODOLOGY

In this section, we develop our framework for evaluation. In particular, we refer to works from the philosophers of science, Rosenberg (2000), Fetzer (1993) and Popper (from Miller 1985), in order to construct criteria for evaluation. We chose the texts of Rosenberg and Fetzer since they offer a comprehensive view of the development of the philosophy of science over the years. They incorporate works of Popper, Kuhn, Hume, Carnap, Hempel, and Lakatos, among others which enables us to obtain a more complete view of their thoughts. We also single the work of Popper since he was directly concerned with the problem of demarcation of science from pseudo-science and influenced the works of other influential philosophers such as Lakatos (1976; 1977). The

resulting framework is subsequently used to analyze the papers we have chosen to reveal possible myths existing in the strategic alignment literature.

1. Framework for evaluation

A central thesis of Popper's (from Miller 1985) argument for a scientific explanation is that it has to be falsifiable, refutable, and testable. In his view, a critical (or scientific) attitude results in a readiness to test the arguments, and a willingness to accept the refutations and falsification resulting from empirical evidence. He argued that genuine tests of a scientific explanation are attempts to refute, not to confirm, the theory. Thus corroboration, best established by proving that a theory holds true in spite of trying to falsify it, is what separates a theory from a myth. Popper (1972) recognizes falsifiability or refutability as the solution to the problem of demarcation. Popper also placed significant importance on the role of logically deductive arguments in a critical approach to theorizing.

Drawing on Popper's work, Fetzer (1993) also argued for the testability of scientific explanations as a necessary condition, and believed that myths have low degree of testability. He believed that theories that do not have any empirical support are no better than myths. He contrasted myths to scientific explanations, the former explaining unfamiliar by familiar and the latter doing the opposite. Fetzer noted that mythical explanations (stories) often exhibit anthropomorphic characteristics. Hence, anthropomorphisms are signs of myths. The structure of scientific arguments is also discussed by Fetzer. Two rules of synthetic arguments (as opposed to analytic arguments whose truth values can be ascertained by their logical form alone) are modus ponens and modus tollens. Modus ponens is a deductive logical rule that follows the structure:

If p then q
p
Therefore q

While modus ponens verifies the antecedent, modus tollens denies the consequent and follows the structure:

If p then q
Not q

Therefore not p

Scientific explanations that violate these logical structures are illogical. Hence, denying the antecedent and verifying the consequent are signs of myths.

Fetzer also discusses the nature of arguments in scientific explanations. A valid argument is a deductive argument, the conclusion of which is true if its premises are true. A sound argument is a valid argument with true premises. A proper argument is an inductive one which inconclusively supports its conclusion. A correct argument is a proper argument with true premises. We use these definitions to ascertain the correctness and soundness of scientific explanations.

Rosenberg (2000) treats scientific theorizing as hypothetico-deductive systems, in which new theories correct and explain the old ones. In his view the official epistemology of science is empiricism and knowledge is only justified by experience. Therefore, theories are scientific if they contain sets of hypotheses which are tested logically by driving observable consequences from them. Citing Hempel's deductive-nomological (D-N, or Covering Law) model, Rosenberg argues that explanans, which contain general laws for deductive explanation, are law-like and follow formal logic to imply the explanandum (the phenomenon to be explained). Similarly, an inductive-statistical (I-S) model of explanation gives good grounds for the explanandum to occur through induction, without guaranteeing the conclusions. However, Hume's 'problem of induction' notes that empirical evidence for any general law is always incomplete and can never provide certainty of truth for a scientific explanation since it relies on the assumption of future uniformity of nature.

The notions of axioms and models explained by Rosenberg are also important for our study. Axioms are a set of sentences in a formalized mathematical language that represent a scientific explanation. Rosenberg considers the idea that a theory can be reduced to axioms as problematic since axiomatization is a linguistic function and hence, prone to problems of interpretation. Similarly, models are concise representations of a theory or phenomenon which are true by definition. The scientific explanation is then a set of

hypotheses that claim that a particular set of things in the real world are satisfied to a varying degree by a set of similar models. Applying the model to the real world requires a connection with observable phenomenon (for example, looking at a photograph, we interpret a subatomic collision). Making this connection from the realm of unobservable things, events, processes, and properties, to real world experiences, makes the use of axioms and models problematic.

We summarize our framework in the table below:

Central Idea	**Proponents**
Testability, refutability, falsifiability	Popper (1972), Kuhn (1979), Lakatos (1976, 1977)
Empirical support	In Fetzer (1993) and Rosenberg (2000)
No use of anthropomorphisms	From Fetzer (1993)
Correct use of logical structures: Modus Ponens and Modus Tollens	From Fetzer (1993)
Nature of arguments: valid, sound, correct, proper	From Fetzer (1993), Bechtel (1988)
Approach to theorizing: D-N Model	Hempel (From Rosenberg, 2000)
Qualified use of axioms and models	From Rosenberg, 2000

Table 1: Framework for evaluation of myths

2. Approach

In reviewing the IT alignment papers, we identified arguments made by the authors that, if used inappropriately, could qualify as mythical based on our framework. However, we need to clarify that we are not questioning the value of these papers. Our intent is to sensitize researchers to the prevalence of myths, and caution them from indiscriminately using them. Myths can be valuable tools to further knowledge and for sense-making, with the caveat that we are aware that they are not laws. The goal of this paper is to highlight this fact. Also, given the scope of the papers it is not possible to analyze all arguments made. Instead, we try to focus on the central themes that have been drawn upon in subsequent research in the field. The framework presented above serves as a lens in looking at the papers. However, instead of trying to find all the criteria, we focus on the salient characteristics of myths found in the papers.

IV. ANALYSIS

Using the framework developed in previous section, we investigated IT alignment literature, focusing on three highly cited studies[3]. In one of the papers, the authors base their data collection solely on anecdotal evidence provided by 'subjective' opinions of executives of 'over 500' fortune 1000 companies. As we previously discussed in the literature review section, people in organizations tend to employ myths to explain unfamiliar things. Hence, some findings of this study could very well be myths rather than scientific indications. While philosophers such as Popper would agree that these anecdotes (or myths) could be a good starting point for achieving scientific explanation, they would argue that they should be treated as conjectures subjected to refutations. In this research, there has not been any attempt for refutation of these findings. Instead, in assessing the validity of their logical arguments, the researchers have attempted to seek confirmation rather than refutation. Their confirmation was achieved through an increase in the frequency of similar answers provided by various executives. In a forward citation analysis, one of the papers citing this study treated these findings as truths[4], something that philosophers would warn against in order to not strengthen the myths. Therefore, the subjective data collected has been used as a conclusive truth. The "unquestioned" beliefs of the interviewed executives have the danger of becoming established myths of IT alignment.

In addition, the study contained arguments that have an incorrect logical structure. For example, one of the arguments is that if there is alignment there must have been good communication (If alignment → then good communication). The example the authors provide to support this argument is the case of a company that attained IT alignment

[3] Luftman et al. (1999), Luftman and Brier (1999), Henderson and Venkatraman (1993), in the order reviewed, are the papers from which we draw the examples used in the analysis section. We wish to reiterate that the focus of our paper is not to critique these works but to use them to demonstrate the potential initiation of myths.

[4] The following quote from Avison et al. (2004) reflects our point:

> "Focusing on the concept of alignment perspectives, they expand the research to identify enablers and inhibitors to alignment within organisations. Their research **confirms** that the major enablers and/or inhibitors to alignment relate to communication and support between business and technology management. They also **confirm** the importance of including IT management in the strategic planning process." (p. 232)

because of having good communication (i.e. the company had good communication → attained alignment). This example invalidates the main argument because it affirms the consequent, thus violating modus tollens.

In the second study the authors claim that if the steps that they propose are followed, alignment will be achieved. Throughout the paper, this argument remains vague and not substantiated empirically or logically. Furthermore, the steps of achieving sustained alignment have not been well justified. The explanations of the steps are not supported by deductive or inductive reasoning or based on previous literature. The only empirical evidence the authors offer is anecdotal evidence from one corporation. Other arguments about these steps have been attempted to be confirmed based on single examples, which do not seem relevant to the context of the arguments. These arguments were not falsifiable because they were too broad and general that practically any action taken by organizations could be inline with the argued recommendation. These prescriptions have not been taken as conjectures and are stated as unquestioned beliefs rather than being open to refutations. These recommendations are unsupported by substantial empirical evidence, or through logical reasoning. While this article is in a practitioner-based journal, and is intentionally prescriptive in nature, it has been drawn upon by subsequent research[5] without questioning the prevalence of myths.

In the third article, the argument that lack of IT alignment leads to inability to realize value from IT has been propagated without justification. This argument has become intuitively an unquestioned belief in subsequent research[6], which refers to the former study as support. The third article has been recognized as reliable research and the proposed research model in this study has been used by many other researchers[7]. In using models which are concise representations of real life phenomena and hence inherently limited, subsequent research should be more careful. It is the task of future researchers to bear in mind the dangers of establishing myths.

[5] For example, see Birchall et al. (2004).
[6] For example, see Maes et al, (2000).
[7] This paper has been cited around 541 times by other researchers (as seen on Google Scholar).

In the reviewed papers use of anthropomorphic statements was seen. Some examples of these statements are provided in Table 2. As mentioned before, anthropomorphism is a sign of mythical statements.

Anthropomorphic Statements
IT understands the business.
IT demonstrates leadership.
IT does not prioritize.
IT does not understand business.
Both IT and business need to listen to one another, communicate effectively, and learn to leverage.
IT communicates in business terms.
IT focuses on applying technical understanding.
Telecommunication giant … tired of …
These discussions promote IT's understanding

Table 2: Examples of anthropomorphic statements

V. Conclusion

A 'myth' is an "unquestioned belief … that is not supported by demonstrated facts." In this paper, we took an initiative to sensitize the reader to how myths are formed and propagated through research, and to warn against the dangers of doing so in IS. By reviewing three highly cited studies, a variety of unsupported arguments, claims, and beliefs were identified. These arguments have been used as building blocks in subsequent research to explain other phenomena. These arguments demonstrate characteristics of mythical statements and as more and more researchers build their works on them, they become more established and unquestioned. Hence, this paper was aimed to be an initial step toward identifying those beliefs. The contribution we wish to make lies in our framework for evaluation of arguments for the potential initiation of myths, and the cautioning of researches against inadvertently propagating or engendering them.

It should be reiterated that the aim of this paper is not to critique the selected papers in alignment but to sensitize the reader to use findings of previous research more critically

without engendering established myths. Though the claims in the original papers may have been true to the data, subsequent use of those claims as truths without caution is what might lead to propagation of myths. Understanding the problems and potential dangers of reinforcing these myths into ideologies, we feel, have implications for both practice and research. This paper also warns practitioners that draw on research to inform their practices to bear in mind the potential problems of institutionalized myths. Researchers should adhere to criteria for "good" science that in proposing a new theory, and in using another theory, a researcher should be aware of its philosophical problems and try to avoid exacerbating the same. Being thorough and conducting research that fits the criteria for "good" science can help IS develop and mature greatly as a field.

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